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General information about the entry*

Entry name **ONC2_HUMAN**
 Primary accession number **O95948**
 Secondary accession numbers None
 Entered in Swiss-Prot in Release 40, October 2001
 Sequence was last modified in Release 40, October 2001
 Annotations were last modified in Release 41, February 2003

Name and origin of the protein

Protein name **One cut domain family member 2**
 Synonyms **ONECUT-2 transcription factor**
OC-2

Gene name **ONECUT2**

From **Homo sapiens (Human) [TaxID: 9606]**

Taxonomy **Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;**
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

References

[1] SEQUENCE FROM NUCLEIC ACID.

MEDLINE=99115605; PubMed=9915796; [NCBI, ExpASY, EBI, Israel, Japan]

Jacquemin P., Lannoy V., Rousseau G.G., Lemaigre F.P.:

"OC-2, a novel mammalian member of the ONECUT class of homeodomain transcription factors whose function in liver partially overlaps with that of hepatocyte nuclear factor-6".

J. Biol. Chem. 274:2665-2671(1999).

Comments

- **FUNCTION:** TRANSCRIPTIONAL ACTIVATOR. ACTIVATES THE TRANSCRIPTION OF A NUMBER OF LIVER GENES SUCH AS HNF3B.
- **SUBCELLULAR LOCATION:** Nuclear.
- **SIMILARITY:** Contains 1 CUT domain.
- **SIMILARITY:** BELONGS TO THE CUT HOMEODOMAIN FAMILY.

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External references

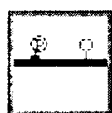
EMBL [Y18198](#); CAB38253.1; -.[EMBL] [GenBank](#) [DDBJ](#) [\[CodingSequence\]](#)

TRANSEAC 10:259; 4.
 Genew HGNC:8139; ONECUT2.
 CleanEx HGNC:8139; ONECUT2.
 MIM 604894 [NCBI: LBI].
 GeneCards ONECUT2.
 GeneLynx ONECUT2: Homo sapiens.
 GO:0003702; Molecular function: RNA polymerase II transcription factor activity
(traceable author statement).
 GO:0007397; Biological process: histogenesis and organogenesis *(traceable author
 statement)*.
 SOURCE ONECUT2: Homo sapiens.
 Ensembl O95948: Homo sapiens. [Entry / Contig view]
 IPR007108: Cut_homeo.
 InterPro IPR003350: Hmoec_CUT.
 IPR001356: Homeobox.
 Graphical view of domain structure.
 Pfam PF02376: CUT: 1.
 PF00046: homeobox: 1.
 ProDom PD000010: Homeobox: 1.
 [Domain structure / List of seq. sharing at least 1 domain]
 SMART SM00389: HOX: 1.
 PROSITE PS00027: HOMEBOX_1: FALSE_NEG.
 PS00071: HOMEBOX_2: 1.
 HOVERGEN [Family / Alignment / Tree]
 BLOCKS O95948.
 ProtoNet O95948.
 ProtoMap O95948.
 PRESAGE O95948.
 DIP O95948.
 ModBase O95948.
 SWISS-2DPAGE Get region on 2D PAGE.

Keywords

Transcription regulation; Homeobox; DNA-binding; Nuclear protein; Activator.

Features



Feature table viewer



Feature aligner

Key	From	To	Length	Description
PROSITE	1	100	100	PROSITE
PROSITE	101	200	100	PROSITE
PROSITE	201	300	100	PROSITE
PROSITE	301	400	100	PROSITE
PROSITE	401	500	100	PROSITE
PROSITE	501	600	100	PROSITE
PROSITE	601	700	100	PROSITE
PROSITE	701	800	100	PROSITE
PROSITE	801	900	100	PROSITE
PROSITE	901	1000	100	PROSITE

Length: **485** Molecular weight: **52482** CRC64: **AF21E052EFBE5DA1** [This is a checksum on the
AA Da sequence]

O95948 in FASTA
format

View entry in original Swiss-Pro format

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BLAST submission on
 HPC, EXPASY SIB
 or at NCBI (U.S.A)



Sequence analysis tools: ProtParam, ProtScale, Compute pI Mw, PeptideMass, PeptideCutter, Dotlet (Java)



SeamProsite, MotifSeam



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Hosted by NCSC U.S. Mirror sites: Bolivia Canada China Korea Switzerland Taiwan				
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NiceProt View of TrEMBL: Q8K557

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General information about the entry

Entry name **Q8K557**
 Primary accession number **Q8K557**
 Secondary accession numbers None
 Entered in TrEMBL in Release 22, October 2002
 Sequence was last modified in Release 22, October 2002
 Annotations were last modified in Release 24, June 2003

Name and origin of the protein

Protein name **Onecut 3**
 Synonyms None
 Gene name **ONECUT3**
 From *Mus musculus* (Mouse) [TaxID: 10090]
 Taxonomy Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

References

[1] SEQUENCE FROM NUCLEIC ACID.

STRAIN=129 SvEvTactBr;

MEDLINE=21942113; PubMed=11944891; [NCBI, ExpASY, EBI, Israel, Japan]

Vanhorenbeeck V., Jacquemin P., Lemaigre F.P., Rousseau G.G.;

"OC-3, a Novel Mammalian Member of the ONECUT Class of Transcription Factors.";

Biochem. Biophys. Res. Commun. 292:848-854(2002).

Keywords

None

Cross-references

EMBL AY080897; AAL86921.1; -, [EMBL / GenBank / DDBJ] [Coding Sequence]

MGID MG1891409; Onecut3.

GeneLynx ONECUT3; *Mus musculus*.

GO:0005667; Cellular component: transcription factor complex *(inferred from direct assay)*.

GO:0003700; Molecular function: transcription factor activity *(inferred from direct assay)*.

GO:0000635;

Biological process: regulation of transcription from Pol II promoter

SOURCE	Q8K557; Mus musculus.
Ensembl	Q8K557; Mus musculus. [Entry / Contig view]
	IPR007108; Cut_homeo.
InterPro	IPR003350; Hhmoec CUT.
	IPR003356; Homeobox.
	Graphical view of domain structure.
Pfam	PF02376; CUT: 1.
	PF00046; homeobox: 1.
ProDom	PD0000010; Homeobox: 1.
	[Domain structure / List of seq. sharing at least 1 domain]
SMART	SM00389; HOX: 1.
PROSITE	PS50071; HOMEBOX_2: 1.
HOVERGEN	[Family / Alignment / Tree]
ProtoMap	Q8K557.
PRESAGE	Q8K557.
ModBase	Q8K557.
SWISS-2DPAGE	Get region on 2D PAGE.

None

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{7}$ $\frac{1}{8}$ $\frac{1}{9}$ $\frac{1}{10}$

None

[illegible]

Length: **490** Molecular weight: **49656** CRC64: **DBB3828589D6B03E** [This is a checksum on the
AA Da sequence]

Q8K557 is a protein of 100 amino acids, with a molecular weight of 10.5 kDa. It is a member of the GTP-binding protein family, and is involved in the regulation of the cell cycle. The protein is encoded by the Q8K557 gene, which is located on chromosome 12. The protein is expressed in various tissues, including liver, kidney, and heart. It is a highly conserved protein, with a high degree of sequence identity to other members of the GTP-binding protein family.

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or at NCBI (USA)




Sequence analysis tools: ProtParam, ProtScale,
Compute pI Mw, PeptideMass, PeptideCutter,
Dotlet (Java)



ScanProsite, MotifScan



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1. Number	Hits	Search Text	DB	Time stamp
1	2	onecut	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003-06-16 08:17
2	100	oc-2	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003-06-16 08:17
3	1055	oc-3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003-06-16 08:17
4	0	onecut and transcription	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003-06-16 08:18
6	0	oc-3 and transcription	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003-06-16 08:18
5	22	oc-2 and transcription	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003-06-16 08:18

FILE 'HONK' ENTERED AT 08:21:45 ON 16 JUN 2003

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, CANCEPLIT' ENTERED AT 08:21:56 ON
16 JUN 2003

L1	66 S ONECUT
L2	431 S OC 2
L3	278 S OC 3
L4	862610 S TRANSCRIPTION
L5	53 S L1 AND L4
L6	32 S L2 AND L4
L7	24 S L3 AND L4
L8	84 S L5-L7
L9	36 DUP PEM L8 (48 DUPLICATES REMOVED)
L10	13 S L9 NOT PY>1999